

**NOTES ON ARHAPHE CICINDELOIDES WALKER
AND JAPETUS MIMETICUS BARBER.**

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The most curious and seemingly least known of the Pyrrhocoridae are the genera *Arhappe* Herrich-Schaeffer 1853 (type *carolina* Herrich-Schaeffer 1853), and *Japetus* Distant 1883 (type *sphaeroides* Distant 1883). The first genus contained only two species, the type and *A. cicindeloides* Walker 1873, until 1920, when *breviata* was added by H. G. Barber. The second genus was set up by Distant for one species, the type; in 1911 Barber described a second species, as *Arhappe mimetica*, later transferred by the author to *Japetus*, where it clearly belongs.

The facies and structure of these two genera might seem to indicate they form a distinct group in the subfamily Euryophthalminae. The globose head, the appressed eyes, the apparently constant brachyptery, would at first glance set them apart from the other genera in the subfamily. In fact, later examination and close study might go so far as to raise them to the rank of a subfamily Arhaphinae. What is said, however, are merely indications for a future re-examination of the group in relation to others in the subfamily.

It should be pointed out that the spelling of the name of the type of *Japetus* is *sphaeroides* Distant 1883, *Biologia Centrali Americana*. Rhynchota I; not *sphaerodes*, as R. H. Hussey consistently makes it in his catalogue of the Pyrrhocoridae (General Catalogue of the Hemiptera, Fascicle III, 1929).

Search through the various references to these two genera reveals only *one* note as to the habits of either—namely, Barber 1910 (Jour. N. Y. Ent. Soc., XVIII: 38) in his paper "Some Mexican Hemiptera-Heteroptera New to the Fauna of the United States." He notes in this as to *Arhappe cicindeloides* Walker, "I found this species rather common in the Huachuca Mts., Arizona, running about on the ground among dead leaves." My own field notes which follow confirm this by close observation of *A. cicindeloides* in nature on two different occasions in Madera (also known as White House) Canyon, in the Santa Rita Mts., Arizona, one on April 19, 1940, and the other on May 5, 1942. Both times the insects were found walking about in or among dry fallen leaves, mostly singly, although some were noted in copulo.

They mate in the ordinary end-to-end manner common to many bugs, and walk about in this position. If alarmed, the mating pairs

separate instantaneously and run to hide among the leaves. A female brought home alive was noticed to extrude a slender, sharp, curved ovipositor, about 3 mm. long. One might deduce it is used to insert the eggs in a somewhat hard or solid substance, dead leaves for instance.

The bugs are quite common, as on the two occasions I have noted at least 60 individuals in a restricted area, among leaves lying in depressions on the ground; but they also walk about on bare spots. One was taken by Dr. W. D. Funkhouser on an oak. Mr. A. A. Nichol has informed me that they are abundant under bear grass.

Four specimens, males and females, were brought home and released in my yard. Immediately, and naturally, they sought shelter in the Bermuda lawn grass and started to climb up the green blades, on which they proceeded to feed, as I carefully noted.

Why the specific name *cicindeloides*? It is true that mounted specimens have a vague resemblance to the beetles, but when living and walking about the insect neither looks nor acts like a *Cicindela*.

In nature, the black-and-white pattern above produces the effect of a large black ant, which is enhanced by the walk and vibration of the antennae. But no such type of ants was seen in the area. All the black ants seen commonly running about were slender and small, barely 6 mm. long. *A. cicindeloides* on the other hand, is stouter relatively to its length of about 12 mm.

Japetus mimeticus Barber has also been taken concealed in dry leaves under an oak, in the Santa Rita foothills, by Owen Bryant on two occasions, the second time with me, when we secured 4 adults and one nymph, on November 2, 1935.

A Note on Preparing Diptera.—It is my opinion that Diptera should be pinned after being in the killing bottle no more than a couple of hours, less in hot weather, and a half hour is sufficient. If the pin bearing males of many flies such as Muscoids generally, Sciomyzidae, Lauxaniidae, etc., is stuck very obliquely into a piece of balsa wood or corrugated cardboard, one or more pins may be placed in the board just above the genitalia for support and the genitalia may be carefully pried open with another pin and that pin fixed into the board to hold the genitalia open while drying. This results in a great saving of time in determining and generally better specimens. If possible the wings should be “flipped” up and the legs pulled down away from the body when pinning.—GEO. STEYSKAL, Detroit, Mich.